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**Search Results** - Record(s) 1 through 10 of 21 returned.

☐ 1. Document ID: US 6564128 B2

L12: Entry 1 of 21 File: USPT May 13, 2003

DOCUMENT-IDENTIFIER: US 6564128 B2
TITLE: System and method for distributed computer automotive service equipment

CLAIMS:

3. The system of claim 2 wherein the processed data returns to the browser computer sufficiently soon after the raw data is transmitted to the server computer whereby the graphically generated meter displays the difference between the sensed wheel alignment angles and values representing wheel alignment angle specifications in real-time.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 2. Document ID: US 6402635 B1

L12: Entry 2 of 21 File: USPT Jun 11, 2002

DOCUMENT-IDENTIFIER: US 6402635 B1
TITLE: Apparatus and method for measuring reaction forces and weight shifts

Brief Summary Text (22):
The monitor may also be used to graphically display a quantity indicative of the movement of the location of the vertical reaction force in the heel-to-toe direction as sensed by the difference in the sum of the beam reaction forces of one pair of beams relative to the opposite pair of beams of each foot plate so as to visually indicate a heel-to-toe weight shift on each foot plate over time.

Brief Summary Text (23):
Likewise, the monitor may be used to graphically display a quantity indicative of the movement of the location of the vertical reaction force in the outside-to-instep direction as sensed by the difference in the sum of the beam reaction forces on one pair of opposed beams relative to the other pair of opposed beams of each foot plate per unit of time to visually indicate an outside-to-instep weight shift on each foot plate over time.

CLAIMS:

7. An apparatus as set forth in claim 1 which further comprises a monitor connected to said processing unit for graphically displaying a quantity indicative of the movement of the location of the foot plate vertical reaction force in the heel-to-toe direction as sensed by the difference in the sum of the reaction forces

on one pair of beams relative to the opposite pair of beams of each foot plate per unit of time to visually indicate a heel-to-toe weight shift on each foot plate over time.

8. An apparatus as set forth in claim 1 which further comprises a monitor connected to said processing unit for graphically displaying a quantity indicative of the movement of the location of the foot plate vertical reaction force in the outside-to-instep direction as sensed by the difference in the sum of the reaction forces on one pair of opposed beams relative to the other pair of opposed beams of each foot plate per unit of time to visually indicate a outside-to-instep weight shift on each foot plate over time.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments  KWIC | Draw Desc | Image

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☐ 3. Document ID: US 6297852 B1

L12: Entry 3 of 21 File: USPT Oct 2, 2001

DOCUMENT-IDENTIFIER: US 6297852 B1
TITLE: Video display method and apparatus with synchronized video playback and weighted frame creation

Detailed Description Text (18):
FIG. 5 graphically illustrates a timing difference and associated intervals used in determining a display time difference data, as well as determining asynchronous display frames. As shown, a series of frames F.sub.0 through F.sub.(k+1) generally indicated by arrow 110 represents frames displayed at the screen refresh rate such as non-video data or other video data to be displayed at a different rate including, for example, graphics data, text data or other data. Frames F'.sub.0 through F'.sub.D[k]+1 represented by arrow 112 represent the playback video frames. As shown, frame F'.sub.D[k] is not synchronized with the frame F(k). As such, a new video playback fame to be displayed at the time that the frame F(k) is to be displayed is created by the system The frame created is represented by dashed circle 114.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments  KWIC | Draw Desc | Image

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☐ 4. Document ID: US 6282438 B1

L12: Entry 4 of 21 File: USPT Aug 28, 2001

DOCUMENT-IDENTIFIER: US 6282438 B1
TITLE: Optical system for measuring metabolism in a body and imaging method

Detailed Description Text (66):
Alternatively, as shown in FIG. 16, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the photodetectors 210a and 210b may be converted into digital signals by A/D converters 212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference between transmitting light intensity levels at two different detection positions is calculated through a similar

procedure to the above calculation process, and the determined relative change amount can be displayed graphically as time series data on the display unit 214.

Detailed Description Text (72):
A logarithmic difference signal value between transmitting light intensity levels detected at two sites is digitally indicated on the output signal value indicating window 221 and an offset value of the logarithmic difference signal value is determined using the output signal adjusting knob 220. For example, in the absence of a local change in hemodynamic movement in the cerebrum of the subject, the logarithmic difference signal between transmitting light intensity levels detected at the two sites is so adjusted as to be zero. Thereafter, measurement is started and time series data 222 representative of the logarithmic difference signal is graphically displayed on the display unit 214. Also, the arithmetic operation described previously is carried out to graphically display a local hemodynamic amount or time-variable changes in relative change amounts of hemoglobin oxide quantity and reduced hemoglobin quantity.

Detailed Description Text (89):
Alternatively, as shown in FIG. 21, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the Photodetectors 210a, 210b, 210c and 210d may be converted into digital signals by the A/D converters 212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference among transmitting light intensity levels at four different detection positions may be calculated through a similar procedure to the above calculation process, and then the determined relative change amount can be displayed graphically as time series data on the display unit 214.



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☐ 5. Document ID: US 6204886 B1

L12: Entry 5 of 21 File: USPT Mar 20, 2001

DOCUMENT-IDENTIFIER: US 6204886 B1
TITLE: TV receiver having recording/reproducing functions and method of recording/reproducing TV signals

CLAIMS:

1. A television receiver having a recording and a reproducing function, comprising:

a recording medium for continuously recording a received television broadcast;

recording medium control means for recording said received television broadcast to said recording medium and for reproducing recorded television broadcast data from said recording medium in parallel; and

display processing means for visually and graphically displaying a time difference between said received television broadcast and said television broadcast data reproduced from said recording medium.

10. A data recording and reproducing method, comprising the steps of:

continuously recording a received television broadcast;

recording said received television broadcast to said recording medium and reproducing recorded television broadcast data from said recording medium in

parallel; and

visually and graphically displaying a time difference between said received television broadcast and said television broadcast data reproduced from said recording medium.



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☐ 6. Document ID: US 6128517 A

L12: Entry 6 of 21 File: USPT Oct 3, 2000

DOCUMENT-IDENTIFIER: US 6128517 A
TITLE: Optical system for measuring metabolism in a body and imaging method

Detailed Description Text (65):
Alternatively, as shown in FIG. 16, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the photodetectors 210a and 210b may be converted into digital signals by A/D converters 212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference between transmitting light intensity levels at two different detection positions is calculated through a similar procedure to the above calculation process, and the determined relative change amount can be displayed graphically as time series data on the display unit 214.

Detailed Description Text (71):
A logarithmic difference signal value between transmitting light intensity levels detected at two sites is digitally indicated on the output signal value indicating window 221 and an offset value of the logarithmic difference signal value is determined using the output signal adjusting knob 220. For example, in the absence of a local change in hemodynamic movement in the cerebrum of the subject, the logarithmic difference signal between transmitting light intensity levels detected at the two sites is so adjusted as to be zero. Thereafter, measurement is started and time series data 222 representative of the logarithmic difference signal is graphically displayed on the display unit 214. Also, the arithmetic operation described previously is carried out to graphically display a local hemodynamic amount or time-variable changes in relative change amounts of hemoglobin oxide quantity and reduced hemoglobin quantity.

Detailed Description Text (87):
Alternatively, as shown in FIG. 21, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the photodetectors 210a, 210b, 210c and 210d may be converted into digital signals by the A/D converters 212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference among transmitting light intensity levels at four different detection positions may be calculated through a similar procedure to the above calculation process, and then the determined relative change amount can be displayed graphically as time series data on the display unit 214.



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☐ 7. Document ID: US 6012002 A

L12: Entry 7 of 21 File: USPT Jan 4, 2000

DOCUMENT-IDENTIFIER: US 6012002 A
TITLE: Vehicle travel meter

Detailed Description Text (17):
Also, it will of course be understood that the display 9 may be analogue or digital. In the case of an analogue display the calculated distance or time differences may be represented graphically or with a pointer and indicating in either case whether the difference is greater or less than the reference. In the case of a digital display, a simple numerical display may be used again with an indication of whether the difference is positive or negative. The display 9 may be integral with the processor 3 or separate. Also, the display 9 and processor 3 need not be mounted on the dashboard of the car. All that is required is for the display 9 to be visible to the driver of the car. The processor 3 may be located anywhere on the car that is convenient. This is also true of the receiver 4 which need not be located in the nose of the car, as shown in the drawings.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 8. Document ID: US 5809446 A

L12: Entry 8 of 21 File: USPT Sep 15, 1998

DOCUMENT-IDENTIFIER: US 5809446 A
TITLE: Instrument for measuring fuel injection time

Detailed Description Text (17):
In the step 140 labeled DISPLAY INJECTION TIME, the time difference determined in the process 130 may be visually displayed in a format useful for the application. For example, the time difference may be displayed numerically for the present value. The time difference may also be displayed graphically, such as a series of time differences gathered over a selected period of time. The injection time may be incorporated into other measurements, such as duty cycle, which are calculated results requiring numerical data to operate on.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 9. Document ID: US 5803909 A

L12: Entry 9 of 21 File: USPT Sep 8, 1998

DOCUMENT-IDENTIFIER: US 5803909 A
TITLE: Optical system for measuring metabolism in a body and imaging method

Detailed Description Text (64):
Alternatively, as shown in FIG. 16, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the photodetectors 210a and 210b may be converted into digital signals by A/D converters

212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference between transmitting light intensity levels at two different detection positions is calculated through a similar procedure to the above calculation process, and the determined relative change amount can be displayed graphically as time series data on the display unit 214.

Detailed Description Text (70):
A logarithmic difference signal value between transmitting light intensity levels detected at two sites is digitally indicated on the output signal value indicating window 221 and an offset value of the logarithmic difference signal value is determined using the output signal adjusting knob 220. For example, in the absence of a local change in hemodynamic movement in the cerebrum of the subject, the logarithmic difference signal between transmitting light intensity levels detected at the two sites is so adjusted as to be zero. Thereafter, measurement is started and time series data 222 representative of the logarithmic difference signal is graphically displayed on the display unit 214. Also, the arithmetic operation described previously is carried out to graphically display a local hemodynamic amount or time-variable changes in relative change amounts of hemoglobin oxide quantity and reduced hemoglobin quantity.

Detailed Description Text (86):
Alternatively, as shown in FIG. 21, the lock-in amplifiers, logarithmic amplifiers and differential amplifiers may not be used, detection signals from the photodetectors 210a, 210b, 210c and 210d may be converted into digital signals by the A/D converters 212, respectively, the digital signals may then be FFT processed with the computer 213 to extract only a signal corresponding to the intensity modulation frequency of the light source, a logarithmic difference among transmitting light intensity levels at four different detection positions may be calculated through a similar procedure to the above calculation process, and then the determined relative change amount can be displayed graphically as time series data on the display unit 214.



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☐ 10. Document ID: US 5684501 A

L12: Entry 10 of 21 File: USPT Nov 4, 1997

DOCUMENT-IDENTIFIER: US 5684501 A
**** See image for Certificate of Correction ****
TITLE: Active matrix display device and method of driving such

Detailed Description Text (17):
By using such kinds of selection signals, the manner in which the display elements are charged when addressed, including that resulting from a reset signal when this signal is similarly shaped, and the nature of the current flowing through their associated non-linear device in the process, are significantly different from the known drive schemes. FIG. 7 illustrates graphically the relationship between the electrical current flowing in a non-linear device 15 against time when a display element 16 is being charged as the selection signal (or reset signal) is applied to a row conductor 16 which would occur when using conventional row drive waveforms of the kind shown in FIGS. 2 and 3. As can be seen, the current initially rises very sharply to reach a peak Ip. This is because the voltage across the display element capacitance cannot change instantaneously and therefore any change in the voltage between the row and column conductors appears directly across the non-linear device. Thereafter, as the display element capacitance charges, the magnitude of the voltage, and thus the current, drops to a comparatively low level which then remains approximately constant for the remainder of the selection period Ts. For comparison,

FIGS. 8, 9 and 10 show graphically the non-linear device currents as a function of time which charge the display element through the same voltage difference in the same time (Ts) when selection (and reset) signals of the kind shown in FIGS. 4, 5 and 6 respectively are used. Clearly, the charging waveforms of FIGS. 8, 9 and 10 have significantly lower peak currents than the charging waveforms of FIG. 7 (i.e. lp'<<lp). The kind of current profile (FIG. 8) produced when using a selection (or reset) signal of the type shown in FIG. 4 has two small current spikes compared with the single large spike in the current profile of FIG. 7. The kind of current profile (FIG. 9) produced when using a selection (or reset) signal of the types shown in FIG. 5 has a smaller peak and is distributed more evenly over the selection (or reset) period. The precise position and amplitude of the peak current will depend on the exact shape of the leading edge of the pulse signal. When using selection signals of the types shown in FIG. 6, a similar current profile (FIG. 10) is produced except that the initial peak is replaced by a series of minor peaks.



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| GRAPHICALLY.USPT. | 55672 |
| GRAPHICALLIES | 0 |
| GRAPHICALLYS | 0 |
| TIME.USPT. | 2057992 |
| TIMES.USPT. | 1009047 |
| DISPLAY$ | 0 |
| DISPLAY.USPT. | 368664 |
| DISPLAYA.USPT. | 9 |
| DISPLAYABEL.USPT. | 1 |
| DISPLAYABIE.USPT. | 2 |
| DISPLAYABILITIES.USPT. | 5 |
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☐ 21. Document ID: US 3787860 A

L12: Entry 21 of 21 File: USPT Jan 22, 1974

DOCUMENT-IDENTIFIER: US 3787860 A
TITLE: AIRBORNE NAVIGATION APPARATUS

Brief Summary Text (6):
Among the several objects of the invention may be noted the provision of airborne VOR navigation apparatus and methods; the provision of such apparatus and methods involving digital computation not only of the actual radial on which an aircraft is located, but also the difference between an actual and a desired radial; the provision of such apparatus and methods providing extremely high accuracy in computing and displaying VOR radials; the provision of such apparatus which is not prone to drift in time; the provision of such apparatus which is solid state in design including a solid state display having no moving parts; the provision of such apparatus providing high reliability and which is relatively economically manufactured; the provision of such apparatus incorporating a graphic type of display, representing not only the actual radial on which an aircraft is located but also the desired radial; the provision of such apparatus including a display which is particularly useful in graphically representing radial interception and holding pattern maneuvers; the provision of such a display which can be utilized for providing ILS localizer indication; the provision of such a display providing rapid pilot assimilation of aircraft position; and the provision of such a display which eases pilot workload by eliminating mental steps in interpreting aircraft position. Other objects and features will be in part apparent and in part pointed out hereinafter.

| Term | Documents |
|---|---|
| GRAPHICALLY.USPT. | 55672 |
| GRAPHICALLIES | 0 |
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**Display Format:** KWIC Change Format

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**Search Results** - Record(s) 11 through 20 of 21 returned.

☐ 11. Document ID: US 5646844 A

L12: Entry 11 of 21 File: USPT Jul 8, 1997

DOCUMENT-IDENTIFIER: US 5646844 A
TITLE: Method and apparatus for real-time monitoring and coordination of multiple geography altering machines on a work site

Detailed Description Text (86):
For example, referring to FIG. 8 an operator display on screen 22 for an earth-contouring application can be generated by equipping two earth-contouring machines with the position and update modules 50,60 described above. The display has as a principal component a two-dimensional digitized site model in plan window 70 showing the desired final contour or plan of site 12 (or a portion thereof) relative to the actual topography. On an actual screen display 70 the difference between the actual site topography and the desired site model can be represented by color coding used to show areas in which earth must be removed, areas in which earth must be added, and areas which have already achieved conformity with the finished site model. The differently shaded or cross-hatched regions on the site displayed in window 70 in FIG. 8 graphically represent the varying differences between the actual site topography and desired site topography, updated in real time for each machine on the site.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 12. Document ID: US 5477531 A

L12: Entry 12 of 21 File: USPT Dec 19, 1995

DOCUMENT-IDENTIFIER: US 5477531 A
**** See image for Certificate of Correction ****
TITLE: Method and apparatus for testing a packet-based network

Brief Summary Text (13):
The correlation data for this test will comprise the minimum and/or the mean packet journey time for each packet size. Where the minimum journey times are derived, these are preferably graphically displayed against packet size; the slope of a straight line placed through the points on this graphical display will give an indication of the network bandwidth whilst the intercept of the same straight line on the time axis will provide an indication of propagation delay. Of course, the minimum journey times could be processed computationally in order to derive the same network characteristics. Where the correlation data includes both the minimum and the mean journey times, graphical display of both against packet size enables the mean queuing time for packets transmitted between the nodes to be derived, this queuing time being the difference between the minimum and mean times for any particular packet size; again, the queuing time could be computed rather than graphically derived. Where the correlation data comprises the mean journey times,

graphical display of these times against packet size can provide an indication of the network's internal packet size since if the network splits up an original sequence packet into smaller packets, this will be reflected in an increased journey time which should show up as a step function on the graphical display. Again, the networks internal packet size could be derived by computation from the correlation data.



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☐ 13. Document ID: US 5255197 A

L12: Entry 13 of 21 File: USPT Oct 19, 1993

DOCUMENT-IDENTIFIER: US 5255197 A
TITLE: Line production management system

Detailed Description Text (41):
3. Data monitoring is carried out by the assembly line attendant from a remote, centralized monitoring station. The quantity of car bodies processed is monitored in the end data saved in the current status computer or in the current status collecting computer. The attendant is able to access any work station data and have them displayed on the attendant's CRT. The planned time-based production quantity is compared against the current state, and the computed difference can be displayed either numerically or graphically. The quantity of car bodies flowing between the lines can also be monitored, and can be displayed graphically as in the case of the quantity of processed car bodies. It is also possible to display this information for different lines numerically or by a color-separated display on a line layout plan. Further, the content of the current status monitoring computer includes: line-by-line summary of the processing information, the status of next processing stage and the quantity of flowing car bodies within the communication network 3, the data on the quantity processed and cycle times in the processing machines.



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☐ 14. Document ID: US 5097432 A

L12: Entry 14 of 21 File: USPT Mar 17, 1992

DOCUMENT-IDENTIFIER: US 5097432 A
TITLE: Evaluation method of flow analysis on molding of a molten material

Brief Summary Text (11):
In order to achieve the above object, the invention provides an evaluation method of flow analysis for molding of a molten material by a system of making a flow analysis on an in-mold molten material through breakdown of a molded part model into minute elements and numerical analysis thereof including the calculi of finite elements, boundary elements, finite differences, FAN and the like, wherein one or more temperature conditions of the molten material are associated with a plurality of loading times respectively for conducting analysis and from the obtained operational results of the temperature distribution of the molten material after loading, an average temperature or a medium layer temperature of each element is calculated as a function Tn=f n(t) having a variable of loading time, the function being graphically indicated on a display apparatus to determine the ranges of the molten material temperature and the loading time at a predetermined mold temperature.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 15. Document ID: US 5097431 A

L12: Entry 15 of 21 File: USPT Mar 17, 1992

DOCUMENT-IDENTIFIER: US 5097431 A
TITLE: Evaluation method of flow analysis on molding of a molten material

Brief Summary Text (11):
In order to achieve the above object, the invention provides an evaluation method of flow analysis on molding of a molten material in a system of making a flow analysis on an in-mold molten material through breakdown of a molded part model into minute elements and numerical analysis thereof including the calculi of finite elements, boundary elements, finite differences, FAN and the like, wherein one or more temperature conditions of the molten material are provided with a plurality of loading times or mold temperature respectively for conducting analysis and from the obtained operational results of the pressure distribution of the molten material after loading, function of the maximum molten material pressure in each element, is provided, said function being graphically indicated on a display apparatus to determine appropriate ranges of the molten material pressure and the loading time at a predetermined mold temperature.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 16. Document ID: US 5036703 A

L12: Entry 16 of 21 File: USPT Aug 6, 1991

DOCUMENT-IDENTIFIER: US 5036703 A
TITLE: Method and apparatus for testing liquid fillings in tanks

Detailed Description Text (9):
Of course, the descibed method and the apparatus for performing the same can be modified in several respects within the limits of the following claims. This applies especially to the functions of the measuring and controlling unit 23, where modern computer techniques offer many possibilities of calculating time differences and graphically or numerically displaying the results.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

☐ 17. Document ID: US 4911427 A

L12: Entry 17 of 21 File: USPT Mar 27, 1990

DOCUMENT-IDENTIFIER: US 4911427 A
TITLE: Exercise and training machine with microcomputer-assisted training guide

Detailed Description Text (18):
When the user commences full fledged training, his/her pulse (Pi) is measured, the speed (H) measured from the revolutions of the wheel (9), the user's pulse (Pi) is compared with the target pulse (P) as shown in FIG. 7 (c), and if Pi<P, the user's pulse (Pi) at that time, the target pulse (P) and the difference between the two are graphically displayed as explained later. If Pi.gtoreq.P, the timer (104) is started, the user's pulse (Pi) and the revolutions (R) are measured, and the speed (H) and distance traveled (K) are calculated. The user's pulse (Pi) at any given time, the target pulse (P), the difference between the two, time remaining, speed (H), etc. are displayed as shown in FIG. 7 (c). When the prescribed time passes, the timer (104) expires and is cleared, at which time the distanced traveled is calculated from the number of revolutions (R).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments  KWIC | Draw Desc | Image

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☐ 18. Document ID: US 4816897 A

L12: Entry 18 of 21 File: USPT Mar 28, 1989

DOCUMENT-IDENTIFIER: US 4816897 A
TITLE: Chrominance to luminance delay and gain measurement display

Detailed Description Text (8):
Thus the present invention provides a method for measuring and displaying precisely chrominance to luminance gain and delay resulting from the differences in the luminance and chrominance channels of a video device or system by establishing from the modulated pulse and bar waveforms of an appropriate test signal luminance and chrominance arrays. The centers of the arrays are used to determine the delay between the chrominance and luminance components, and the peaks at the centers are used to determine the gain difference between the chrominance and luminance components with the results being displayed both numerically and graphically on a display having rectangular coordinates corresponding to percentage amplitude and to time delay between chrominance and luminance components.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments  KWIC | Draw Desc | Image

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☐ 19. Document ID: US 4700318 A

L12: Entry 19 of 21 File: USPT Oct 13, 1987

DOCUMENT-IDENTIFIER: US 4700318 A
TITLE: Project construction with depiction means and methods

Detailed Description Text (32):
Placement of suitable relational links (shown in part in FIG. 9) in digital electronic computer memories (as via memory addresses) is well known in the art and is within the skill of software designers. Also within programming skill are the steps of converting drawn elements of structure to depiction in another medium such as a video display, shading such display with reference to a schedule or related time characteristics, comparing scheduled and actual items and determining differences between them, and annotating a display of structural features graphically with arrows or other symbols and optionally with textural information. The same is true of devising ways of varying such displays by diminished or enhanced

intensity, blinking or flashing between normal and varied intensity (including on and off) and other visual modifications that will come to mind.



☐ 20. Document ID: US 4320010 A

L12: Entry 20 of 21 File: USPT Mar 16, 1982

DOCUMENT-IDENTIFIER: US 4320010 A
**** See image for Certificate of Correction ****
TITLE: Regeneration detector for water softeners

Detailed Description Text (15):
FIG. 3 represents a set of waveforms prepared from data taken from an experimental system functioning in accordance with the teachings of the present invention, useful in illustrating the manner in which the hardness front progresses through the ion exchange resin bed when the water flow is continuous and of a constant volume rate. Also graphically displayed in FIG. 3 is the plot of the potential difference between a given probe (probe B) which is used as a reference and that existing at various other probes as a function of time. The data for the graph of FIG. 3 was obtained from a system incorporating 18 identical stainless steel probes, probe No. 1 being located proximate the upper end of the tank and probe 18 being located proximate the bottom thereof. Probe 1 was shorted to probe 18. In this arrangement, probe 17, a probe being located toward the bottom of the resin bed, was used as the reference point. It is also possible to locate the reference probe in the zone below the bottom of the resin bed, i.e., in the softened water zone. In FIG. 3, the hardness front and the voltages corresponding thereto were measured at different points in time. Specifically, at time equal to t.sub.1 the voltage measured at the various probes is as indicated by the dotted line representation identified by numeral 44. At this time the hardness front was located near probe 9, as indicated by solid line curve 46. Again, with the water continuously flowing, 50 minutes later, at t=t.sub.1 +50 min., the voltage observed at the various probes was as indicated in the dashed line curve 48 and the hardness front was disposed proximate pin 10 as indicated by curve 50.

| Term | Documents |
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| GRAPHICALLY.USPT. | 55672 |
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**Search Results** - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6550672 B1

L12: Entry 1 of 6 File: USPT Apr 22, 2003

DOCUMENT-IDENTIFIER: US 6550672 B1
TITLE: Method and system for presenting item information using a portable data terminal

Abstract Text (1):
The present invention relates to an improved portable shopping system. The system is provided with improved data presentation system for presenting customer desired data on a portable terminal. The portable terminal includes components for presenting audio as well as video information to the customer. The audio and/or video information corresponds to one or more of the customer's user preferences.

Detailed Description Text (50):
In FIG. 7E, an example is provided of a consumer using the cholesterol preference. The consumer has scanned an item of broccoli, a no cholesterol item. The scanned item is displayed with a friendly message and a happy face which in this case acts as a "link" to a consumer's advocate home web page available on the Internet which provides various data and recommendations on how to prepare broccoli and other healthy foods. The selection of this link, in the illustrated example, would download a text-only version of the web page. In the event a larger display was used such as that shown in FIG. 2, the graphics version of the page would be displayed.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw De

☐ 2. Document ID: US 6526362 B2

L12: Entry 2 of 6 File: USPT Feb 25, 2003

DOCUMENT-IDENTIFIER: US 6526362 B2
TITLE: Network diagnostic meter

Abstract Text (1):
A portable test meter is disclosed for measuring, calculating, recording and monitoring significant system parameters for a local communication network of the type used in industrial automation applications. The meter is disclosed in the context of a network employing the DeviceNet protocol. For each network parameter of interest, a rotary switch selects a desired one for display. An auto search mode

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selectable by the operator, increments through selected network parameters and compares measured or calculated values against stored data representing acceptable, marginal, or unacceptable conditions, and an associated visual indicia is displayed for each unacceptable or margin condition detected.

Detailed Description Text (42):
If a particular measurement under investigation is found to be within desired operating specifications, the meter signifies a "happy" face indicated by the symbol 48 on the display 12 in FIG. 1. Similarly, if a particular measurement under investigation is not within the desired operating specifications, but is also not within the unacceptable specifications, a "neutral" face is illuminated as indicated by reference number 49 in FIG. 1. Third, if a particular measurement under investigation is found to be unacceptable, the system illuminates a "sad" face symbol indicated at 50 in FIG. 1.



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☐ 3. Document ID: US 6199753 B1

L12: Entry 3 of 6 File: USPT Mar 13, 2001

DOCUMENT-IDENTIFIER: US 6199753 B1
TITLE: Method and system for presenting item information using a portable data terminal

Abstract Text (1):
The present invention relates to an improved portable shopping system. The system is provided with improved data presentation system for presenting customer desired data on a portable terminal. The portable terminal includes audio as well as video presentation means which are used to provide customer specific marketing files to promote the sale of identified items.

Detailed Description Text (80):
In FIG. 7E, an example is provided of a consumer using the cholesterol preference. The consumer has scanned an item of broccoli, a no cholesterol item. The scanned item is displayed with a friendly message and a happy face which in this case acts as a "link" to a consumer's advocate home web page available on the Internet which provides various data and recommendations on how to prepare broccoli and other healthy foods. The selection of this link, in the illustrated example, would download a text-only version of the web page. In the event a larger display was used such as that shown in FIG. 2, the graphics version of the page would be displayed.



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☐ 4. Document ID: US 6084528 A

L12: Entry 4 of 6 File: USPT Jul 4, 2000

DOCUMENT-IDENTIFIER: US 6084528 A

h e b b g e e e f e ef b e

TITLE: Intranet scanning terminal system

Abstract Text (1):
An improved portable terminal system is described employing linked data files to present related information on a configurable display device. The portable terminal uses a machine coded reader to read machine coded data on an item and to register such information in a corresponding collection file. The system retrieves associated data files and presents such files in the form of a link if such information is determined to be non-essential. Thus, non-essential data may be presented as optional available data which may be accessed with a simple election command.

Detailed Description Text (82):
The consumer has scanned an item of broccoli, a no cholesterol item. The scanned item is displayed with a friendly message and a happy face which in this case acts as a "link" to a consumer's advocate home web page available on the Internet which provides various data and recommendations on how to prepare broccoli and other healthy foods. The selection of this link, in the illustrated example, would download a text-only version of the web page. In the event a larger display was used such as that shown in FIG. 2, the graphics version of the page would be displayed.



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☐ 5. Document ID: US 5979757 A

L12: Entry 5 of 6 File: USPT Nov 9, 1999

DOCUMENT-IDENTIFIER: US 5979757 A
TITLE: Method and system for presenting item information using a portable data terminal

Abstract Text (1):
The present invention relates to an improved portable shopping system. The system is provided with improved data presentation system for presenting customer desired data on a portable terminal. The portable terminal includes audio as well as video presentation means which are used to provide customer specific marketing files to promote the sale of identified items.

Detailed Description Text (80):
In FIG. 7E, an example is provided of a consumer using the cholesterol preference. The consumer has scanned an item of broccoli, a no cholesterol item. The scanned item is displayed with a friendly message and a happy face which in this case acts as a "link" to a consumer's advocate home web page available on the Internet which provides various data and recommendations on how to prepare broccoli and other healthy foods. The selection of this link, in the illustrated example, would download a text-only version of the web page. In the event a larger display was used such as that shown in FIG. 2, the graphics version of the page would be displayed.



h e b b g e e e f e ef b e

☐ 6. Document ID: US 5813026 A

L12: Entry 6 of 6 File: USPT Sep 22, 1998

DOCUMENT-IDENTIFIER: US 5813026 A
TITLE: Portable electronic device for intermittently executing a program stored on transposable memory

Abstract Text (1):
A portable electronic device is disclosed. The device has a first program stored in memory contained within the device and a second program stored on transposable memory which is releasably connectable to the device. The transposable memory comprises a plug-in module having a EEPROM. The second program stored on the transposable memory comprises a series of groups of instructions which are downloaded, as required, by the device and executed in order. The specific groups to be downloaded are determined by a jump table which accesses different groups of instructions in response to input signals. The instructions to be downloaded are identified by variable addresses in the jump table, and, the variable addresses are updated by means of the first program and the second program. In one embodiment, the device is a combination wrist watch and user interactive device such that the first program operates the wrist watch device and the second program comprises a behavioral modification program to assist the user to stop performing acquired behavioral responses such as using tobacco products, alcohol, or over-eating, in response to external stimuli.

Detailed Description Text (36):
After the alternate response images 62 are displayed the device 10 transfers a group of instructions from the transposable memory 14 to alternately display a positive symbol 64, such as a "happy face", and a negative symbol 66, such as a "serious face". The jump table 40 is re-set at this time by one of these groups of instructions so that activation of activation button S2 identifies a group of instructions of the second program sequentially stored in the transposable memory 14 which instruct the processor 11 to display a positive symbol and play a happy tune. The jump table 40 is also re-set by one of these groups of instructions so that activation of activation button S3 identifies a group of instructions of the second program sequentially stored in the transposable memory 14 which instruct the processor 11 to display a negative symbol and play a sad tune. The user then indicates whether the user has selected one of the alternative behavioral responses or the acquired behavioral response by activating the activation button S2 or activation button S3, respectively. The corresponding group of instructions are then executed to display the symbols.

Col 8 lines 41-60



Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

| Term | Documents |
|---|---|
| HANDHELD | 9787 |
| HANDHELDS | 70 |
| PORTABLE | 141149 |

h e b b g e e e f e ef b e

| | |
|---|---|
| PORTABLES | 546 |
| HAPPY | 2410 |
| HAPPIES | 3 |
| HAPPYS | 0 |
| DISPLAY$ | 0 |
| DISPLAY | 395986 |
| DISPLAYA | 9 |
| DISPLAYABEL | 1 |
| ((HANDHELD OR PORTABLE).AB. AND (DISPLAY$ WITH HAPPY WITH FACE$)).USPT. | 6 |

There are more results than shown above. Click here to view the entire set.

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**Display Format:** KWIC Change Format

Previous Page Next Page Go to Doc#

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| Set Name side by side | Query | Hit Count | Set Name result set |
|---|---|---|---|
| | *DB=USPT; PLUR=YES; OP=ADJ* | | |
| L33 | L26 and ((email or e-mail) same vacation) | 12 | L33 |
| L32 | L26 and ((email or e-mail) with vacation) | 7 | L32 |
| L31 | L26 and vacation | 21 | L31 |
| L30 | L29 and vacation | 18 | L30 |
| L29 | L26 and (network and (email or e-mail)) | 193 | L29 |
| L28 | L26 and vacatiion | 0 | L28 |
| L27 | L26 and (email with vacation$) | 0 | L27 |
| L26 | L25 and (hand adj1 held) | 590 | L26 |
| L25 | ((709/$)!.CCLS.) | 15935 | L25 |
| L24 | L21 or L22 | 3 | L24 |
| L23 | L15 and (hand adj1 held) | 2 | L23 |
| L22 | L15 and handheld | 2 | L22 |
| L21 | L15 and hand-held | 1 | L21 |
| L20 | L17 and handheld$ | 0 | L20 |
| L19 | L17 and hand-held$ | 0 | L19 |
| L18 | L17 and hand-held | 0 | L18 |
| L17 | 5654886.pn. | 1 | L17 |
| L16 | 5654886.pn, | 0 | L16 |
| L15 | (((709/$)!.CCLS.)) and (network$ and display$ and condition$ and information$).ab. | 11 | L15 |
| L14 | (((709/$)!.CCLS.)) and (network$ and display$ condition$ information$).ab. | 0 | L14 |
| L13 | ((709/$)!.CCLS.) and (network$ and display$ condition$ information$).abs | 0 | L13 |
| L12 | (display$ with graphically with time with differenc$) | 21 | L12 |
| L11 | (display$ with graphically with level$ with time with differenc$) | 3 | L11 |
| L10 | L3 and (display$ with graphically with level$ with time$) | 10 | L10 |
| L9 | L3 and (display$ with graphically with level$ with condition$) | 0 | L9 |
| L8 | L3 and (display$ with graphically with level) | 63 | L8 |
| L7 | L3 and (display$ with graphically with level with freshness) | 0 | L7 |
| L6 | L3 and (display$ with graphically with elapse$ with time) | 0 | L6 |
| L5 | L3 and (display$ with level$ with condition$).ab. | 14 | L5 |
| L4 | L3 and (display$ with level$ with condition$) | 344 | L4 |
| L3 | 709/$.ccls or (714/$)!.CCLS. or 345/$.ccls. | 53540 | L3 |
| L2 | ls.L1 | 0 | L2 |
| L1 | (709/$)!.CCLS. or 714/$.ccls. | 35583 | L1 |

see 5, 7, 8, 13, 16, 19 in L12

END OF SEARCH HISTORY

L33: Entry 1 of 12 File: USPT Apr 22, 2003

DOCUMENT-IDENTIFIER: US 6553407 B1
TITLE: Form route manager for workflow systems and methods

Detailed Description Text (74):
The workflow may be initiated from a PC, terminal, or workstation by sending a workflow e-mail to the form route manager. One of ordinary skill would understand after review of the present application, that the computers at each e-mail address can encompass any device with a display and input, including hand-held and portable terminals, bar code readers, radio frequency, infrared, and ultraviolet-connected terminals, and other input/output devices that may participate in business procedures. The initial workflow document e-mail can be obtained from the form route manager by sending a request e-mail for blank workflow e-mails for each of the active procedures. The form route manager responds with a list of procedures that may be initiated by that user. The user edits the list and sends it back to the form route manager. The form route manager then responds with workflow document e-mails in their initial state as requested. These may be used immediately or saved by the user in their mail log for later use. Alternatively, the e-mail system can have blank initial e-mail forms that were sent by the form route manager in folders. Users can initiate workflow processes by just selecting the appropriate e-mail, use the REPLY function to address the e-mail to the form route manager, fill in the form and send it. Since the e-mail was from the form route manager, the user need not address the e-mail if REPLY is used.

Detailed Description Text (80):
For example using the organization illustrated in SQL TABLE ORGANIZATION, an e-mail from employee W with PROJECT=Project 3 would be sent to the manager of employee W, Z. Similarly, an e-mail from employee Y would be sent to manager Q. The mapping table can be designed to identify alternate or backup personnel where the role table specifies a list of e-mail addresses with a selection rule. Special e-mails to the form route manager that edit the mapping table may be used to modify or to assign an alternate when a person is absent or on vacation.

Detailed Description Text (86):
Many e-mail systems provide functions that separate e-mails based on sender identification. This will provide an easy way for users to separate the workflow e-mails from their other e-mail. Sort by date and other sorts of the in-box can be used to prioritize the workflow e-mails for each user. Some e-mail systems will sort on the subject field and the form route manager can send the due date in this field. Some e-mail systems have several e-mail priorities that can be used by the business procedure to help prioritize the users' workflow e-mails. Some e-mail systems have an automated e-mail-forwarding mechanism that will permit a user to assign a second user as the recipient of the e-mails. This function forwards to the second user the e-mails addressed to the first user. This function can be used when a user goes on vacation or on an extended trip and cannot execute the process steps assigned to him. Use of the REPLY and REPLY ALL functions is essential for easy use of the e-mail based workflow system. It avoids the need for any of the users to ever enter the address of the form route manager and easily supports a backup, alternate form route manager. The e-mail systems are evolving to provide good user interfaces and functions. The e-mail based workflow system can take advantage of many of these functions and minimize the need for any special programs in the PC, terminal host, or workstation.

Current US Original Classification (1):
709/206

Current US Cross Reference Classification (1):
709/203

Current US Cross Reference Classification (2):
709/207

US006553407B1

(12) **United States Patent**
**Ouchi**

(10) **Patent No.: US 6,553,407 B1**
(45) **Date of Patent: *Apr. 22, 2003**

(54) **FORM ROUTE MANAGER FOR WORKFLOW SYSTEMS AND METHODS**

(75) Inventor: **Norman Ken Ouchi**, San Jose, CA (US)

(73) Assignee: **Solectron Corporation**, Milpitas, CA (US)

( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/020,689**

(22) Filed: **Dec. 12, 2001**

**Related U.S. Application Data**

(60) Continuation of application No. 09/417,280, filed on Oct. 13, 1999, now Pat. No. 6,442,594, which is a division of application No. 08/901,539, filed on Jul. 28, 1997, now Pat. No. 5,978,836.

(51) **Int. Cl.**[7] ..... **G06F 15/16**

(52) **U.S. Cl.** ..... **709/206**; 709/203; 709/207

(58) **Field of Search** ..... 709/206, 207, 709/203, 219, 217, 245, 239

(56) **References Cited**

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|---|---|---|---|
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(List continued on next page.)

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| EP | 95114678.6 | 3/1996 |
| EP | 96308763.0 | 6/1997 |

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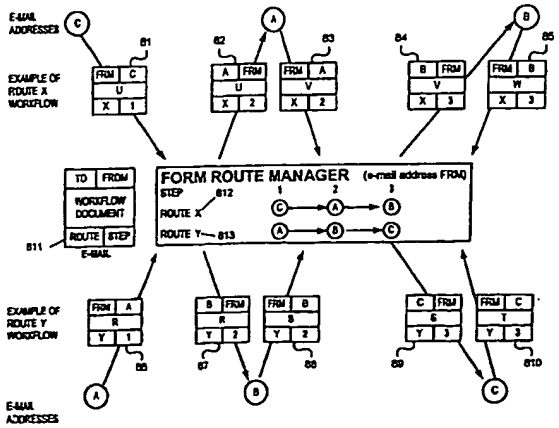
*Primary Examiner*—Zarni Maung
(74) *Attorney, Agent, or Firm*—Robert Moll

(57) **ABSTRACT**

The invention relates to a form route manager in a computer network. In one embodiment, the form route manager includes a sequenced list of e-mail addresses, means for determining if an e-mail received in the e-mail system originates from the last e-mail address in the sequenced list, and if so, deleting the e-mail, and if not, sending the e-mail to the next e-mail address in the sequenced list. In another, the form route manager includes a sequenced list of e-mail addresses, means for receiving a web page, including the document and a step indicator, means for determining from the step indicator and the route, whether it is the first step, the next step, and the next e-mail address, means for updating the step indicator to the next step, the e-mail address to the next e-mail address, and if it is the first step, assigning a second URL to the document, and means for sending the e-mail with the second URL, the updated step indicator and the document to the next e-mail address. In still another, the form route manager includes a sequenced list of IP addresses, means for sending the document as a web page to a first IP address in the sequenced list, means for receiving the web page, including the document and a step indicator, after the document is processed at the first IP address in the sequenced list, means for determining from the route and the step indicator, whether it is the first step, the next step, and the next IP address in the sequenced list, and if it is the first step, assigning a URL to the document, means for updating the step indicator to the second step and the IP address to a second IP address in the sequenced list, means for sending the web page with the updated step indicator and the document to the second IP address in the sequenced list, and means for receiving the web page, including the document and the updated indicator, after the document is processed at the second IP address in the sequenced list.

**3 Claims, 27 Drawing Sheets**



WEST

Your wildcard search against 10000 terms has yielded the results below.

***Your result set for the last L# is incomplete.***

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Generate Collection | Print

**Search Results** - Record(s) 1 through 10 of 10 returned.

☐ 1. Document ID: US 6563523 B1

L10: Entry 1 of 10 File: USPT May 13, 2003

DOCUMENT-IDENTIFIER: US 6563523 B1
TITLE: Graphical control of a time-based set-up feature for a video game

Current US Cross Reference Classification (1):
345/833

Current US Cross Reference Classification (2):
345/835

Current US Cross Reference Classification (3):
345/857

Current US Cross Reference Classification (4):
345/963

Current US Cross Reference Classification (5):
345/970

CLAIMS:

7. A method of graphically controlling a time-based set-up feature for a video game comprising: visually displaying a plurality of movable symbols of the set-up feature along a first axis and a plurality of time periods along a second axis, said symbols representing magnitudes controlling different levels of erotica that can be used in the video game, the different levels of erotica including no erotica, bikini, and nude, each of said movable symbols being associated with a separate time period along said second axis; and receiving inputs from the graphical interface to select one or more of the symbols during one or more of the time periods.

8. A method of graphically controlling a time-based set-up feature for a video game comprising: visually displaying a plurality of movable symbols of the set-up feature along a first axis and a plurality of time periods along a second axis, said symbols representing a plurality of levels of volume, each of said movable symbols being associated with a separate time period along said second axis; and receiving inputs from the graphical interface to select one or more of the symbols during one or more of the time periods.

☐ 2. Document ID: US 6542138 B1

L10: Entry 2 of 10 File: USPT Apr 1, 2003

DOCUMENT-IDENTIFIER: US 6542138 B1
TITLE: Active matrix electroluminescent display device

Detailed Description Text (27):
The operation of the pixel in this respect is illustrated graphically in FIG. 6 which shows the relationship between the display element's instantaneous light output level, I, (i.e. the number of photons emitted per second) and time, T. On the time axis, Td denotes the start of the pixel's drive period, immediately following its address period, and Tf represents the end of the frame period. At the beginning of the drive period, therefore, the light output from the display element is relatively high (as determined by the applied data signal). Photocurrent generated in the device 40 then has the effect of gradually, and generally linearly, reducing the gate voltage of the TFT 22, so that the display element's light output level decreases in corresponding fashion, as shown in the region X in FIG. 4. Upon the gate threshold voltage level of the device 40 being attained at the node 41, as a result of the drive current through the display element falling to a certain lower limit, the device 40 switches on, at point Ty, whereupon the TFT 22 rapidly turns off and light output from the element 20 ceases.

Current US Original Classification (1):
345/76

Current US Cross Reference Classification (2):
345/77

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 6016562 A

L10: Entry 3 of 10 File: USPT Jan 18, 2000

DOCUMENT-IDENTIFIER: US 6016562 A
TITLE: Inspection data analyzing apparatus for in-line inspection with enhanced display of inspection results

Brief Summary Text (17):
A third aspect of the present invention is directed to an inspection data analyzing apparatus for in-line inspection which analyzes detected defect data signals which are obtained on a semiconductor wafer after an optional point of time after two or more steps of inspection steps are complete, comprising: (a) means for receiving the detected defect data signals and for judging to which one of predetermined levels a defect size provided by each one of the detected defect data signals belongs, to thereby generate drawing data signals which provide the levels to which defects belong with predetermined display forms which are different from each other for each one of inspection steps; and (b) means for graphically displaying the display forms based on the drawing data signals which are obtained by the judging and generating means (a), for each one of the inspection steps.

Brief Summary Text (18):
A fourth aspect of the present invention is directed to an inspection data analyzing apparatus for in-line inspection which analyzes detected defect data signals which

are obtained on a semiconductor wafer by an inspection apparatus after an optional point of time after two or more steps of inspection steps are complete, comprising: (a) means for receiving the detected defect data signals and for obtaining defect density data signals which provide defect densities per chip based on the detected defect data signals, and for judging to which one of levels assigned in advance each one of the defect density data signals belong, to thereby generate drawing data signals which provide each one of the levels to which each one of the defect density data signals belongs with predetermined display forms, for each one of inspection steps; and (b) means for graphically displaying the display forms based on the drawing data signals which are obtained by the drawing data generating means (a), for each one of the inspection steps.

Brief Summary Text (20):
A sixth aspect of the present invention is directed to an inspection data analyzing apparatus for in-line inspection which analyzes detected defect data signals which are obtained on a semiconductor wafer by an inspection apparatus after an optional point of time after two or more steps of inspection steps are complete, comprising: (a) means for receiving the detected defect data signals, for obtaining critical ratio data signals which provide defect critical ratios per chip based on the detected defect data signals, and for judging to which one of levels, assigned in advance, each one of the critical ratio data signals belongs, to thereby generate first drawing data signals which provide each one of the levels to which each one of the critical ratio data signals belongs with predetermined display forms for each one of inspection steps; (b) means for generating second drawing data signals which provide a chip arrangement map and a defect distribution map of wafer as they overlap each other, for each one of the inspection step; and (c) means for graphically displaying the display forms based on the first and second detected defect data signals, for each one of the inspection step.

Current US Original Classification (1):
714/724

Current US Cross Reference Classification (3):
714/745



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☐ 4. Document ID: US 5960403 A

L10: Entry 4 of 10 File: USPT Sep 28, 1999

DOCUMENT-IDENTIFIER: US 5960403 A
**** See image for Certificate of Correction ****
TITLE: Health management process control system

Detailed Description Text (17):
Regardless of whether a compact video game system, another type of commercially available handheld microprocessor-based unit, or a specially designed unit is used, the system of FIG. 1A provides a self-care blood glucose monitoring system in which program cartridge 42: (a) adapts handheld microprocessor unit 12 for displaying instructions for performing the blood glucose test sequence and associated calibration and test procedures; (b) adapts handheld microprocessor unit 12 for displaying (graphically or alphanumerically) statistical data such as blood glucose test results taken during a specific period of time (e.g., a day, week, etc.); (c) adapts handheld microprocessor unit 12 for supplying control signals and signals representative of food intake or other useful information to data management unit 10; (d) adapts handheld microprocessor unit 12 for simultaneous graphical display of blood glucose levels with information such as food intake; and, (e) adapts handheld microprocessor unit 12 for displaying information or instructions from a healthcare

professional that are coupled to data management unit 10 from a clearinghouse 54. In the event that computer 48 absorbs all of the functions of unit 12 and data management unit 10, cartridge 42 or appropriate software is communicated directly to computer 48 instead. Computer 48 then performs all of the above functions. The manner in which the arrangement of FIG. 1A implements the above-mentioned functions and others can be better understood with reference to FIG. 2 discussed further below.

Current US Cross Reference Classification (1):
345/707

Current US Cross Reference Classification (2):
345/708



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☐ 5. Document ID: US 5623590 A

L10: Entry 5 of 10 File: USPT Apr 22, 1997

DOCUMENT-IDENTIFIER: US 5623590 A
TITLE: Dynamic graphics arrangement for displaying spatial-time-series data

Current US Original Classification (1):
345/772

Current US Cross Reference Classification (1):
345/440

Current US Cross Reference Classification (2):
345/835

Current US Cross Reference Classification (3):
345/839

Current US Cross Reference Classification (4):
345/969

Current US Cross Reference Classification (5):
345/974

Current US Cross Reference Classification (6):
345/977

CLAIMS:

2. A dynamic graphics arrangement for use in a computer having a display comprising

means for storing time-varying data associated with respective ones of a plurality of nodes,

means responsive to receipt of a predetermined request inputted by a user of said computer for displaying on said display a plurality of multidimensional symbols representing respective ones of said nodes, the dimensions of each of said symbols being indicative of the levels of data associated with its respective one of said nodes,

means for displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred, and

means, responsive to a user of said computer interacting with said displayed tool so as to cause said tool to move through said respective points in time, for dynamically adjusting the dimensions of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool.

7. A dynamic graphics arrangement for use in a computer having a display comprising

means for storing time-varying data associated with respective ones of a plurality of nodes,

means responsive to receipt of a predetermined request inputted by a user of said computer for displaying on said display a plurality of non-numeric symbols representing respective ones of said nodes, each of said symbols being defined by first and second variables indicative of the levels of data associated with its respective one of said nodes,

means for displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred, and

means, responsive to a user of said computer interacting with said displayed tool so as to cause said tool to move through said respective points in time, for dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool,

wherein each of said displayed symbols is a rectangle and wherein said first and second variables respectively define the height and width of the associated rectangle.

8. A dynamic graphics arrangement for use in a computer having a display comprising

means for storing time-varying data associated with respective ones of a plurality of nodes,

means responsive to receipt of a predetermined request inputted by a user of said computer for displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by first and second variables indicative of the levels of data associated with its respective one of said nodes,

means for displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred,

means, responsive to a user of said computer interacting with said displayed tool so as to cause said tool to move through said respective points in time, for dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool, wherein each of said displayed symbols is a rectangle and said first and second variables respectively define the height and width of the associated symbol, and

means for displaying at least one of said symbols in a first color when the length of its respective width exceeds the length of its respective height by more than a predetermined percentage and for displaying said at least one of said symbols in a second color when the length of its respective height exceeds the length of its respective width by more than said predetermined percentage.

10. A dynamic graphics arrangement for use in a computer having a display comprising

means for storing time-varying data associated with respective ones of a plurality

of nodes,

means responsive to receipt of a predetermined request inputted by a user of said computer for displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by first and second variables indicative of the levels of data associated with its respective one of said nodes,

means for displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred,

means, responsive to a user of said computer interacting with said displayed tool so as to cause said tool to move through said respective points in time, for dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool, wherein each of said displayed symbols is a rectangle and wherein said first and second variables respectively define the height and width of the associated rectangle, and means for displaying said symbols in one of a number of predetermined colors as a function of the lengths of their respective heights and widths.

11. A dynamic graphics arrangement for use in a computer having a display comprising

means for storing time-varying data associated with respective ones of a plurality of nodes,

means responsive to receipt of a predetermined request inputted by a user of said computer for displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by first and second variables indicative of the levels of data associated with its respective one of said nodes,

means for displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred,

means, responsive to a user of said computer interacting with said displayed tool so as to cause said tool to move through said respective points in time, for dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool, and

means for displaying a plurality of tools such that said user may interact with each of said plurality of tools in order to control the display of said time-varying data and said symbols, wherein said plurality of tools includes a tool having a predetermined scale operative by said user for simultaneously and dynamically changing the lengths and widths of said displayed symbols commensurate with the distance that said user moves a slider on said scale.

13. A method of dynamically displaying on a display associated with a computer time-varying data associated with a plurality of nodes, said method comprising the steps of

responding to receipt of a predetermined request inputted by a user of said computer by displaying on said display a plurality of multidimensional symbols representing respective ones of said nodes, each of said symbols being indicative of the levels of data associated with its respective one of said nodes,

displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred, and

responding to said user interacting with said displayed tool so as to cause said tool to move through a number of said respective points in time by dynamically

adjusting the dimensions of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool.

18. A method of dynamically displaying on a display associated with a computer time-varying data associated with a plurality of nodes, said method comprising the steps of

responding to receipt of a predetermined request inputted by a user of said computer by displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by at least first and second variables indicative of the levels of data associated with its respective one of said nodes,

displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred, and

responding to said user interacting with said displayed tool so as to cause said tool to move through a number of said respective points in time by dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool, and wherein said first and second variables respectively define the height and width of a rectangle, and

adjusting the height and width of each of said displayed symbols commensurate with the levels of time-varying data occurring at their respective nodes at a particular point in time.

21. A method of dynamically displaying on a display associated with a computer time-varying data associated with a plurality of nodes, said method comprising the steps of

responding to receipt of a predetermined request inputted by a user of said computer by displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by at least first and second variables indicative of the levels of data associated with its respective one of said nodes,

displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred,

responding to said user interacting with said displayed tool so as to cause said tool to move through a number of said respective points in time by dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool, and wherein said first and second variables respectively define the height and width of a rectangle, and

displaying said symbols in one of a number of predetermined colors as a function of the lengths of their respective heights and widths.

22. A method of dynamically displaying on a display associated with a computer time-varying data associated with a plurality of nodes, said method comprising the steps of

responding to receipt of a predetermined request inputted by a user of said computer by displaying on said display a plurality of symbols representing respective ones of said nodes, each of said symbols being defined by at least first and second variables indicative of the levels of data associated with its respective one of said nodes,

displaying on said display a tool calibrated so that it represents respective points in time at which said data occurred,

responding to said user interacting with said displayed tool so as to cause said tool to move through a number of said respective points in time by dynamically adjusting the first and second variables of each of said displayed symbols so that they reflect graphically the levels of the data that occurred at their associated nodes at a point in time represented by the current position of said displayed tool

displaying a plurality of tools such that said user may interact with each of said tools in order to control the display of said time-varying data and said symbols, and

displaying as one of said tools a tool having a predetermined scale operative by said user for dynamically changing the size of said displayed symbols commensurate with the distance that said user moves a slider on said scale.



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☐ 6. Document ID: US 5428370 A

L10: Entry 6 of 10 File: USPT Jun 27, 1995

DOCUMENT-IDENTIFIER: US 5428370 A
TITLE: Matrix display device and its method of operation

Detailed Description Text (13):
In general, the ageing of the picture element MIMs 15 has been found to vary somewhat with the voltage level applied to the picture elements, i.e. the data (video) drive level. The driving of a display element to a higher value causes larger currents to flow through the associated MIM 15 and increases the rate of ageing. This effect is illustrated graphically in FIG. 6 which shows the variation in the on-voltage (i.e. threshold voltage), Vth, of a MIM 15 over time, t. The solid curves I and II show the effects of ageing of a MIM of a picture element driven fully black and fully white respectively, corresponding to a relatively high and low drive levels respectively, in a twisted nematic LC display device using crossed polarisers. The drive level applied to the MIM 15 of the reference circuit 34 preferably is arranged to be some average of the drive levels of the MIMs 15 of the picture elements so that the ageing of the MIM 35 takes the form approximately of the dashed curve in FIG. 6, which is typical of picture elements driven at a range of levels. The drive level on the reference circuit 34 is determined by the voltage signal V.sub.A, representing a video level, during the period in which the reference circuit in effect is selected by the selection signal portions of the applied scanning signal waveform. This drive level may be selected in one of two ways as shown by the schematic circuit diagrams of FIGS. 7a and 7b respectively. In the simpler circuit of FIG. 7a, a preset reference voltage V.sub.x lying between +V.sub.cp and -V.sub.cp is selected and in accordance with the well-known inverting drive requirements of LC materials, is switched in polarity every field by means of an inverter 70 and a switch 71 operated by a line/field inversion timing signal T.sub.f in similar manner to the data signals applied to the columns 17 by the column driver circuit 22. The preset value V.sub.x is chosen to correspond to some predetermined average data signal level of the picture element MIMs 15.

Current US Original Classification (1):
345/205

Current US Cross Reference Classification (1):
345/212

☐ 7. Document ID: US RE34559 E

L10: Entry 7 of 10 File: USPT Mar 8, 1994

DOCUMENT-IDENTIFIER: US RE34559 E
TITLE: Diagnostic method for analyzing and monitoring the process parameters in the operation of reciprocating equipment

Brief Summary Text (6):
The method of the present invention comprises the steps of: dividing the stroke length traversed by the ram into a predetermined number of incremental positions; generating analog data corresponding to the position of the ram and the pressure developed by the ram at each such incremental position; recording the time transpired in the movement of the ram along the stroke length; calculating the velocity of the ram at each incremental position, graphically displaying the data corresponding to pressure and velocity on a display screen of a cathode ray tube as a function of the incremental position of the ram along the stroke length until the velocity reaches a predetermined minimum level, with the display forming a master profile for such data; storing the data representing the master profile at a predetermined address location in a nonvolatile memory of a microcomputer; repeating the sequence of generating, calculating and storing analog data corresponding to pressure and velocity as a function of stroke length for a second die casting operation to form a current profile of such data and displaying said current profile on the display screen along with the master profile for comparison purposes. The best mode for practicing the present invention is described hereafter at length in connection with the system shown in FIGS. 1-7.

Current US Cross Reference Classification (2):
345/16

Current US Cross Reference Classification (3):
345/672

CLAIMS:

6. A diagnostic method as defined in claim 1 further comprising detecting when said predetermined minimum velocity level is reached and graphically displaying the analog data of pressure and velocity in step (e) as a function of time upon reaching said minimum velocity level and until said stroke length is completed. .Iadd.7. A diagnostic method for analyzing and monitoring the process parameters of reciprocating equipment in which a linear reciprocating device is traversed over a fixed stroke length at high speed comprising the steps of:

(a) dividing a parameter indicative of movement of the device into a predetermined number of incremental data collection points;

performing, for a first ram cycle, the following steps (b)-(f):

(b) generating data corresponding to said parameter and the pressure developed by said device at each such incremental data collection point;

(c) recording the time transpired in the movement of said device along said stroke length;

(d) determining the velocity of said device at each such incremental data collection point;

(e) generating a graphical representation corresponding to pressure and velocity as a function of the device movement parameter along said stroke length;

(f) storing said data in the form of master profile data at an address location;

(g) repeating the sequence of generating data, determining velocity and storing data corresponding to pressure and velocity as a function of movement of said linear reciprocating device for a second ram cycle to form a current profile of such data for such second ram cycle; and

(h) generating a graphical representation of said current profile along

with said master profile for diagnostic purposes..Iaddend. .Iadd.8. A diagnostic method as defined in claim 7 wherein the step (e) does not generate said graphical representation corresponding to said pressure and velocity as a function of the device movement parameter for a range of device movement parameters that are substantially zero..Iaddend. .Iadd.9. A diagnostic method as defined in claim 8 wherein upon reaching said near zero velocity, said data is graphically represented as a function of time by establishing a time frame for the number of data collection points remaining after said minimum velocity level is reached, dividing said time frame into incremental time increments and recording said data at each of said time increments until the increments of time equal the completion of the time frame..Iaddend. .Iadd.10. A diagnostic method as defined in claim 9 further including measuring temperature in the reciprocating equipment for data collection points along the stroke length and graphically representing said temperature along with said pressure and velocity..Iaddend. .Iadd.11. A diagnostic method as defined in claim 10 further comprising generating a cursor in the form of a vertical line for any one of the data collection points along said stroke length; adjusting the position of said line cursor to a desired point in increments corresponding to distance between said points; and generating an indication of the data of pressure and velocity corresponding to the adjusted position of said line cursor..Iaddend. .Iadd.12. A diagnostic method as defined in claim 8 further comprising detecting when said velocity level is reached, and graphically representing the data of pressure and velocity in step (e) as a function of time upon reaching said velocity level and until said reciprocating device traversal is completed..Iaddend. .Iadd.13. A method for monitoring the process parameters of a linear reciprocating device which traverses a stroke path at high speed to develop pressure, said method comprising the steps of:

(a) collecting data at each of a plurality of data collection points, said data corresponding to a parameter indicative of movement of the device and the pressure developed by said device during a first ram cycle;

(b) graphically representing a first pressure and velocity profile as a function of the movement of said device along said stroke path based on said data collected by said step (a);

(c) repeating said collecting step (a) for a further ram cycle; and

(d) graphically representing a further pressure and velocity profile as a function of the movement of said device along said stroke path based on

said data collected by said repeated step (a)..Iaddend. .Iadd.14. A method as in claim 13 wherein said graphically representing step (d) includes superimposing graphical representations of said first profile and said further profile..Iaddend. .Iadd.15. A method as defined in claim 13 wherein said method further comprises the steps of generating a cursor, permitting a user to move the cursor so as to point to a portion of at least one of said graphically represented first profile and said graphically represented further profile, and providing numerical information indicating pressure and velocity corresponding to said pointed-to portion of said profile..Iaddend. .Iadd.16. A method as defined in claim 13 wherein the graphically representing step (d) includes the step of graphically representing said profiles as a function of positions of said device where said device has a non-zero velocity..Iaddend. .Iadd.17. A method as defined in claim 13 wherein for a range of substantially zero velocities of said linear reciprocating device, said profiles are

graphically represented as a function of time..Iaddend. .Iadd.18. A method as defined in claim 13 wherein a temperature is also measured and collected for each data collection point along the stroke length and said collected temperature is graphically represented along with said pressure and velocity..Iaddend. .Iadd.19. A method for monitoring the process parameters of a reciprocating apparatus of a type including a ram which traverses a stroke path at high speed to produce pressure, said method including the following steps:

(a) providing a stored representation of a master velocity profile for said ram as a function of position of said ram along said stroke path;

(b) measuring the movement of said ram;

(c) deriving a velocity signal indicating velocity of said ram at a plurality of positions along said stroke path based on said measured movement; and

(d) generating, based on said stored representation and said velocity signal, a superimposed graphical representation of (i) said ram velocity as a function of said plurality of positions of said ram along said stroke path and (ii) said master velocity profile..Iaddend. .Iadd.20. A method as defined in claim 19 further including the steps of:

providing a stored representation of a master pressure profile for said ram as a function of position of said ram along said stroke path,

deriving a pressure signal indicating the pressure developed by said ram at said plurality of positions along said stroke path, and

generating a superimposed graphical representation of (i) said pressure signal as a function of said plurality of positions of said ram along said stroke path and (ii) said master pressure profile..Iaddend. .Iadd.21. A method as defined in claim 19 wherein the step of measuring includes dividing the stroke length into a number of increments and generating values corresponding to the position of said ram at each such increment based on said measured movement..Iaddend. .Iadd.22. A method for monitoring the process parameters of a high speed reciprocating ram, said ram traversing a stroke path at high speed to produce pressure, said method including the following steps:

(a) storing indicia of electrical signals representing a master pressure profile;

(b) measuring position of said ram along said stroke path;

(c) measuring pressure produced by said ram; and

(d) electrically generating an image including:

a first graphical representation of pressure versus position of said ram along said stroke path based on said measured position and pressure, and

a second graphical representation of pressure versus position of said ram along said stroke path based on said stored master pressure profile indicia,

said first and second graphical representations being at least partially

superimposed in said image..Iaddend. .Iadd.23. A method as in claim 22 wherein said steps (b) and (c) are repeated, and said storing step (a) comprises the step of storing indicia of measurements obtained by a repetition of said steps (b) and (c)..Iaddend. .Iadd.24. A method as in claim 22 wherein said method further includes the steps of:

measuring the passage of time; and

also electrically generating a graphical representation of pressure versus time based on said measured time and said measured position..Iaddend. .Iadd.25. A method for monitoring a reciprocating apparatus including a ram traversing a stroke path at

high speed to produce pressure, said method including the following steps:

(a) measuring movement of said ram;

(b) deriving a velocity signal from said measured movement, said velocity signal indicating velocity of said ram at a plurality of positions along said stroke path;

(c) deriving a pressure signal indicating said pressure produced by said ram at a plurality of positions of said ram along said stroke path; and (d) graphically representing said velocity and pressure signals as a function of position of said ram along said stroke path. .Iaddend. .Iadd.26. A method for monitoring a reciprocating apparatus including a ram and for electrically generating a graphical representation of results of said monitoring, said ram traversing a stroke path at high speed during a ram cycle to produce pressure, said method including the following steps:

(a) providing a time base;

(b) measuring position of said ram for a first ram cycle;

(c) measuring pressure produced by said ram for said first ram cycle;

(d) electrically generating a first graphical representation of pressure versus position of said ram for said first ram cycle based on said measured ram position and said measured pressure; and

(e) electrically generating a second graphical representation of pressure versus time for said first ram cycle based on said measured ram pressure and said time base, including the step of facilitating substantially simultaneous viewing of said first and second graphical representations.

.Iaddend. .Iadd.27. A method as in claim 26 wherein:

said step (d) includes the step of representing said pressure as a function of position along a first axis graduated in position increments; and

said step (e) includes the step of representing said pressure as a function of time along a second axis, said second axis being graduated in time increments, said first and second axes being simultaneously viewable. .Iaddend. .Iadd.28. A method as claim 26 wherein:

said stroke path has an end;

said method further includes determining when the ram reaches the ned of said stroke path;

said step (d) comprises representing said pressure versus position of said moving ram; and

said step (e) comprises representing said pressure versus time for pressure existing after said ram has reached the end of said stroke path. .Iaddend. .Iadd.29. Apparatus for monitoring the process parameters of reciprocating equipment, said equipment including a ram which traverses a stroke path at high speed to produce pressure, said apparatus comprising:

measuring means coupled to said ram for measuring the movement of said ram;

velocity means coupled to said measuring means for deriving a first signal indicating velocity of said ram at a plurality of positions along said stroke path based on said measured movement;

a memory storing indicia representing a master velocity profile for said ram as a function of position of said ram along said stroke path; and

imaging means coupled to said velocity means and to said memory for generating a

superimposed graphical representation of (i) said velocity as a function of position of said ram along said stroke path and (ii) said

master velocity profile. .Iaddend. .Iadd.30. Apparatus as defined in claim 29 wherein:

said apparatus further includes pressure sensing means for providing a pressure signal indicating the pressure developed by said ram at said plurality of positions along said stroke path;

said memory also stores indicia representing a master pressure profile for said ram as a function of position of said ram along said stroke path; and

said imaging means generating a superimposed graphical representation of said pressure as a function of said plurality of positions of said ram along said stroke path and said master pressure profile. .Iaddend. .Iadd.31. Apparatus as defined in claim 29 wherein the movement measuring means includes means for dividing the stroke length into a number of incremental positions and generating values corresponding to the position of said ram at each such incremental position based on said measured movement. .Iaddend. .Iadd.32. Apparatus for monitoring the process parameters of reciprocating equipment, said equipment including a ram which traverses a stroke path at high speed to produce pressure, said apparatus including:

movement measuring means coupled to said ram for measuring the movement of said ram;

pressure measuring means for measuring the pressure produced by said ram as said ram traverses said stroke path;

means for storing indicia representing a master pressure profile for said ram; and

electrical imaging means, coupled to said storing means, said movement measuring means and said pressure measuring means, for generating an image based on said measured movement and pressure, said image including (i) a first graphical representation of pressure versus position of said ram along said stroke path, and (ii) a further graphical representation of pressure versus ram position along said stroke path based on said stored master pressure profile indicia, said first and second graphical representations being at least partially superimposed in said image.

.Iaddend. .Iadd.33. Apparatus as in claim 32 wherein said first graphical representation corresponds to a first ram stroke; said storing means is coupled to said movement measuring means and said pressure measuring means; and said stored master pressure profile indicia are stored based on said measured movement and pressure for a second ram stroke different from said first ram stroke. .Iaddend. .Iadd.34. Apparatus as in claim 28 wherein:

said apparatus further includes means for measuring the passage of time; and

said imaging means is also for electrically generating a graphical representation of pressure versus time based on said measured time and

said measured position. .Iaddend. .Iadd.35. Apparatus for monitoring the process parameters of reciprocating equipment, said equipment including a ram coupled to a fluid which traverses a stroke path at high speed to produce pressure, said apparatus including:

movement measuring means coupled to said ram for measuring the movement of said ram;

means coupled to said movement measuring means for deriving a first signal indicating velocity of said ram at a plurality of positions along said stroke path based on said measured movement;

pressure sensing means for providing a second signal indicating pressure produced by

said ram at a plurality of positions of said ram along said stroke path; and

imaging means coupled to said deriving means and said pressure sensing means for generating a graphical velocity and pressure profile representation of said first and second signals as a function of said plurality of positions of said ram along said stroke path. .Iaddend. .Iadd.36. Apparatus for monitoring the process parameters of reciprocating equipment, said equipment including a ram traversing a stroke path at high speed during a ram stroke cycle to produce pressure, said apparatus comprising:

first measuring means for measuring the movement of said ram for a first ram stroke cycle;

second measuring means for measuring the pressure for said first ram stroke cycle;

third measuring means for measuring the passage of time during which said movement and pressure are measured; and

output means coupled to said first, second and third measuring means, for producing signals representing first and second substantially simultaneously viewable graphical representations based on said measured ram movement, said measured pressure, and said measured time passage, said first graphical representation showing pressure of said fluid versus position of said ram for said first ram stroke cycle, said second graphical representation showing pressure of said fluid versus time for said first ram stroke cycle. .Iaddend. .Iadd.37. Apparatus as in claim 30 wherein said output means provides signals representing an axis, signals representing said pressure as a function of position along an axis graduated in position increments, and signals representing said pressure as a function of time along a second axis being graduated in time increments, said first and second axes being simultaneously viewable. .Iaddend. .Iadd.38. Apparatus as in claim 30 further including an electronic display coupled to said output means, said electronic display displaying said first graphical representation showing pressure versus ram position for a portion of said first ram cycle corresponding to a first time period during which said ram is moving, said electronic display displaying said second graphical representation showing pressure versus time for a portion of said first ram cycle corresponding to a second time period during which said ram has substantially ceased moving. .Iaddend.



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☐ 8. Document ID: US 5196839 A

L10: Entry 8 of 10 File: USPT Mar 23, 1993

DOCUMENT-IDENTIFIER: US 5196839 A
**** See image for Certificate of Correction ****
TITLE: Gray scales method and circuitry for flat panel graphics display

Detailed Description Text (6):
Prior art display systems have typically utilized three techniques for generating gray scales at a monochrome display to applicants' knowledge. An analog technique, as graphically shown in FIG. 1B, uses the technique of applying different voltage levels for the same period of time to generate different intensity levels for the pixels in a display. Pulse width modulation techniques as shown illustratively in FIG. 1C, apply a constant display voltage for varying periods of time to provide different gray scales at a display. Frame rate control techniques, as shown in FIG. 1D, apply a constant display voltage for a constant period of time to pixels over a number of frames. The gray scales are achieved by applying or not applying the voltage to selected pixels during successive frames.

Current US Original Classification (1):
345/691

Current US Cross Reference Classification (1):
345/213

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 9. Document ID: US 4734869 A

L10: Entry 9 of 10 File: USPT Mar 29, 1988

DOCUMENT-IDENTIFIER: US 4734869 A
TITLE: Diagnostic method for analyzing and monitoring the process parameters in the operation of reciprocating equipment

Brief Summary Text (6):
The method of the present invention comprises the steps of: dividing the stroke length traversed by the ram into a predetermined number of incremental positions; generating analog data corresponding to the position of the ram and the pressure developed by the ram at each such incremental position; recording the time transpired in the movement of the ram along the stroke length; calculating the velocity of the ram at each incremental position, graphically displaying the data corresponding to pressure and velocity on a display screen of a cathode ray tube as a function of the incremental position of the ram along the stroke length until the velocity reaches a predetermined minimum level, with the display forming a master profile for such data; storing the data representing the master profile at a predetermined address location in a nonvolatile memory of a microcomputer; repeating the sequence of generating, calculating and storing analog data corresponding to pressure and velocity as a function of stroke length for a second die casting operation to form a current profile of such data and displaying said current profile on the display screen along with the master profile for comparison purposes. The best mode for practicing the present invention is described hereafter at length in connection with the system shown in FIGS. 1-7.

Current US Cross Reference Classification (2):
345/440

Current US Cross Reference Classification (3):
345/440.1

CLAIMS:

6. A diagnostic method as defined in claim 1 further comprising detecting when said predetermined minimum velocity level is reached and graphically displaying the analog data of pressure and velocity in step (e) as a function of time upon reaching said minimum velocity level and until said stroke length is completed.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 10. Document ID: US 4504920 A

L10: Entry 10 of 10 File: USPT Mar 12, 1985

DOCUMENT-IDENTIFIER: US 4504920 A
TITLE: Data analysis and display method for reciprocating equipment in industrial processes

Brief Summary Text (2):
Accordingly, a need exists for a diagnostic instrumentation system which can readily be applied to the process machinery to monitor and record objective measurements of machine performance during an actual production cycle. The objective measurements should represent machine operational data which will provide technical personnel with the means to make appropriate adjustments to maintain optimum process integrity. Prior art instrumentation claiming to satisfy this need are based upon the use of high speed analog graphic plotters which typically use expensive ultraviolet sensitive photographic paper in combination with transducers and signal conditions designed to collect machine data and display it. One of the major disadvantages to the use of a graphic plotter is that its output is a graphical display of the given parameter under observation versus time. A time display is difficult to interpret and requires sophisticated expertise to derive and calculate quantitative values for the critical parameters affecting the process. Not only is the interpretation subject to error but it does not provide readily apparent information from which machine adjustments may be made in the next production cycle. Another significant disadvantage is that the oscillographs must be adjusted to accommodate the transducers used on a specific machine and must be calibrated for each different type of transducer. Also, because of the high speed of the paper travel of the recorder it is necessary for a technical person to be constantly attentive of the oscillograph so as to minimize the waste of the expensive paper. In accordance with the method of the present invention a profile of the critical operational parameters in a die casing operaion, viz., velocity and pressure are generated as a function of the ram position along its linear stroke. This permits dramatically reduced set up time and readily provides information for adjustment of the variable parameters within precise limits to assure maximum production quality and performance. The method of the present invention comprises the steps of: dividing the stroke length traversed by the ram into a predetermined number of incremental positions; generating analog data corresponding to the position of the ram and the pressure developed by the ram at each such incremental position; recording the time transpired in the movement of the ram along the stroke length; calculating the velocity of the ram at each incremental position, graphically displaying the data corresponding to pressure and velocity on a display screen of a cathode ray tube as a function of the incremental position of the ram along the stroke length until the velocity reaches a predetermined minimum level, with the display forming a master profile for such data; storing the data representing the master profile at a predetermined address location in a nonvolatile memory of a microcomputer; repeating the sequence of generating, calculating and storing analog data corresponding to pressure and velocity as a function of stroke length for a second die casting operation to form a current profile of such data and displaying said current profile on the display screen along with the master profile for comparison purposes. The best mode for practicing the present invention is described hereafter at length in connection with the system shown in FIGS. 1-7.

Current US Cross Reference Classification (1):
345/440

CLAIMS:

2. A diagnostic method as defined in claim 1 further comprising detecting when said predetermined minimum velocity level is reached and graphically displaying the analog data of pressure and velocity in step (e) as a function of time upon reaching said minimum velocity level and until said stroke length is completed.

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